CT TRAIL CONSTRUCTION SPECIFICATIONS

A. SCOPE:

A.1. The Contractor shall provide all goods or services and deliverables as required, described, and detailed below and shall meet all service and delivery timelines as specified by this Contract.

A.2. All trail construction will meet the specifications and standards established in the American Trails guide for Sustainable Trail Development (https://www.americantrails.org/images/documents/Sustainable-TrailDevelopment-Guidelines.PDF) for full bench trail construction (unless alternative is approved by a designated State Parks representative.)

B.
B.1. The contractor is responsible for providing all trail building tools and transportation. Tools will comply with the standards established in the USDA Trail Construction and Maintenance Notebook 2007 Edition (http://www. fs.fed. us/t d/pubs/pdfpubs/pdf07232806/pdf07232806dpi72.pdf) and the American Trails non-profit organizational website (www.americantrails.org). Trail building machinery will be restricted to electric and gas operated hand tools and mini skid steer systems with a wheel or track width of 42inches or less.

B.2. The trail must be designed to provide a long lasting, sustainable, back country trail that can be traversed by novice hikers with moderate effort. Due to the nature of the terrain and location of the project, the trail section will not be designated as an Americans with Disabilities (ADA) compliant trail. The trail will be designed for hiking and foot traffic only.

B.3. Prior to the start of construction, the State will provide the contractor with a daily contact list for the designated park staff member from the Cumberland Trail Scenic Park. The list will identify the points of contact for issues, questions, and design modifications/exceptions.

B.4. The trail corridor includes the trail tread, back slope, out slope, and ceiling above the trail tread. The trail corridor should be cleared by removing small trees and limbs to open a "6 foot-wide by 8 foot-tall box". Trees with diameter of 4 inches including roots system will be removed if in trail tread. Trees 4 inches in diameter in trail corridor but not in trail tread can be cut down to ground. Trees alive or dead with diameter greater than 4 inches cannot be removed unless authorized for the purpose of moving machinery for trail construction. The removal of these trees must be approved by the designated park staff member.

B.5. The trail tread will be a minimum of 30 inches with a full or solid bench. Fill material will not be used to gain trail width. In areas where rock and trees cannot be removed, a minimum 18 inches of trail tread is acceptable for up to 3 feet of the trail length and must maintain the same trail grade.

B.6. The trail tread must have an out slope of 3% - 6% to ensure proper drainage. Roots and rock that pose a tripping hazard will be fully removed. The trail back slope should be at an angle that resembles the slope of the terrain.

Bidders Please Note: Mileage and footage calculations are approximate based on field staff calculations. These are the best representations of numbers in an approximate fashion based on usage of consumer grade GPS equipment. As GIS parameters (latitude and longitude) vary slightly based on satellite readings at any given time – it is the responsibility of the bidder to verify the mileage/footage calculations to their satisfaction before bidding.

B.7. The trail segments are described here with notes regarding required construction, armoring, and stepways -- Concrete Bridge on Pine Creek Road to Piney River/Moccasin River Confluence:

Point 162 to Point 163. This is the beginning of the section. There will be a rock staircase going 15 yards down the hill until it reaches the point 163 where bench cut will begin.

Point 163 to Point 164. This is the bottom of the staircase and a bench cut will begin.

Point 164 to Point 165. The trail crosses a gullied road bed. The bench cut continues on this section.

Point 165 to Point 166. The bench cut continues through thick patches of Mountain Laurel.

Point 166 to Point 167. There is a 30-foot stretch of rock work, then bench cut continues for 30 feet.

Point 167 to Point 168. There is rock work through a small drainage and the bench cut continues after the drainage.

Point 168 to Point 169. Rock work continues through this section.

Point 169 to Point 170. The rock work ends here and a bench cut begins.

Point 170 to Point 171. The bench cut ends and rock work begins.

Point 171 to Point 172. Rock work ends and the bench cut begins.

Point 172 to Point 173. The cut continues through a small thick patch of Rhododendron.
Point 173 to Point 174. There is a 20-30 ft section of rock work and then back to bench cut.

Point 174 to Point 175. The bench cut continues through scattered, rocky soil.

Point 175 to Point 176. The bench cut continues on relatively flat ground. This section resembles a possible old road bed.

Point 176 to Point 177. The trail leaves the old road bed and the bench cut continues on hillside.

Point 177 to Point 178. The bench cut continues through lightly scattered rock.

Point 178 to Point 179. The bench cut ends here and rock work begins on the hillside.

Point 179 to Point 180. Rock work ends here and bench cut continues through scattered rock.

Point 180 to Point 181. Trail turn to parallel drainage and hillside needs rock steps.

Point 181 to Point 182. The rock steps end here and bench cut continues toward

drainage.

Point 182 to Point 183. This is the NW waypoint of bridge site of the drainage crossing. Pay very close attention to the property boundary.

Point 183 to Point 184. This is the SE waypoint of bridge site of the drainage crossing. Pay very close attention to the property boundary. The bench cut continues.

Point 184 to Point 185. The bench cut ends here and rock work begins through Rhododendron patch.

Point 185 to Point 186. The rock work ends here and bench cut begins here.

Point 186 to Point 187. The bench cut ends here and rock work begins.

Point 187 to Point 188. This section is still rocky, but in mixed rocky soil terrain. It will most likely remain rockwork.

Point 188 to Point 189. Rock work begins here.

Point 189 to Point 190. Rock work ends here and bench cut continues with scattered rock.

Point 190 to Point 191. The bench cut ends here and rock work begins.

Point 191 to Point 192. The rock work continues here with small patches of bench cut.

Point 192 to Point 193. Bench cut begins here.

Point 193 to Point 194. Bench cut ends and Rock work is needed along bluff line.

Point 194 to Point 195. The rock work ends here and bench cut continues.

Point 195 to Point 196. The bench cut continues through a mixture of scattered rock and thick Rhododendron.

Point 196 to Point 197. Heavy rock work is needed here.

Point 197 to Point 198. Scattered rock and dirt work is needed here.

Point 198 to Point 199. Rock work is needed here.

Point 199. The section ends here at the bridge site.

B. 8. The trail segments are described here with notes regarding required construction --Piney River Section 2, from Pruett Boundary to AFM ROW. The trail segments are described here with notes regarding required construction, armoring, and stepways.

Point 014 to Point 015. Trail section begins at boundary with the Pruett property. The trail turns slightly uphill traveling along rocky side slope. Rock work will be required in this section.

Point 015to Point 016. Trail continues onto rocky hillside with two small drain crossings.

Point 016 to Point 017. Trail continues through rocky terrain requiring moving and puzzling of rocks together to create trail through a rock field.

Point 017 to 0 Point 18. Rock work ends. Trail must be cut into side slope.

Point 018 to Point 019. Rocky area begins again requiring moving and puzzling of rocks together to create trail through rock field.

Point 019 to Point 020. Trail requires side slope construction with rock work mixed in sporadically.

Point 020 to Point 021. Essentially every foot in this section requires rockwork, moving and puzzling of rocks together to create trail through rock field.

Point 021 to Point 022. Trail section requires continuous rockwork. Trail passes through large drain requiring some rockwork.

Point 022 to Point 023. Trail work transitions to necessary side slope construction with sporadic rock work. This segment is along a bluff line.

Point 023 to Point 024. Trail must be built through a very rocky area requiring moving and puzzling of rocks together to create trail through rock field. Trail through this area enters extreme storm damage that will require cutting and removal of tree stems.

Point 024 to Point 025. Trail work in this area requires rock and removal of extreme storm debris and tree stems.

Point 025 to Point 026. Trail work in this area requires rock and removal of extreme storm debris and tree stems.

Point 026 to Point 027. Trail work in this area requires rock and removal of extreme storm debris and tree stems. The section ends at a drain crossing.

Point 027 to Point 028. Trail work in this area continues through rock and extreme storm damage that will require stem and debris removal. Trail will begin with drain crossing and end at the end of the heavy storm damage area.

Point 028 to Point 029. Trail construction continues through area with blowdowns that will require removal. The trail bed must continue onto a side slope requiring a mix of rock work and side hill cut.

Point 029 to Point 030. Trail must continue on a side slope requiring a mix of rock work and side hill cut.

Point 030 to Point 031. Trail construction begins with a climb on a rocky hillside requiring a rock staircase to the crest of hillside.

Point 31 to Point 32. Trail work begins at end of rock staircase. Rock work will continue thoughout this section.

Point 32 to Point 33. Rock work ends and the trail continues to the beginning of small drain. The Contractor must pay very close attention to property boundary in this area.

Point 33 to Point 34. Construction of this section begins and ends with small drain crossing.

Point 34 to Point 35. Construction of this section begins and ends with small drain crossing.

Point 35 to Point 36. Construction of this section begins and ends with small drain crossing.

Point 36 to Point 37. Construction of this section begins with a small drain crossing and ends at the beginning of a mountain laurel thicket.

Point 37 to Point 38. Trail continues through mountain laurel thicket to the end of section 2. The AFM ROW is marked by a Carsonite post.

B. 9. The trail design will be designated by the Cumberland Trail Staff with a series of plastic, orange marking tape tied to trees throughout the project area The orange plastic markers are referred to as flags and the series of flags is referred to as the flag line. The knot side of the flag on the tree designates the trail corridor. The contractor is expected to follow the flag line for the construction of the trail. The contractor can implement minor changes in the trail design based on their knowledge and experience; however, the contractor must have approval from a designated park staff member for any major changes made to the design. Minor changes on trail design must stay within 10 yards of the original design, any change in design that deviates farther is defined as major and will need approval. Waypoints are only a general guide to the trail location and length.

B.10. In sections where there is little to no mineral soil, the trail should be built using rock material from the area surrounding the trail. The trail tread will be accomplished by "puzzling or armoring" the rock together or using existing, local rocks to build steps. Steps should have a rise of 8 -10 inches maximum for a majority of the section. The maximum limit can be adjusted for unique situations and only for less than 10 percent of the section. The contractor can determine the best method for puzzling/armoring and step construction. However, the contractor must gain approval from the designated park staff member if the rock steps will exceed 10 inches in rise.

C.
Completion Date
All work is to be complete and the Contractor will schedule inspection of all trail work with Justin P.
Wilson Cumberland Trail State Park Staff to ensure satisfactory completion by: August 1, 2022.